

REMARKS

Claims 1-3, 6, and 8-15 and 22-30, 32, 33, 35-43, and 45-52 remain pending after amendment.

Claim Amendments

By this amendment, claims 4, 31, 34 and 44 are cancelled. Claims 1, 22, and 33 are amended to state that the polysaccharide is present as the sole pharmaceutical agent. This amendment is supported by cancelled claims 4, 34 and 44. Claim 31 is cancelled as being redundant in view of claim 9. No new matter is added by this amendment.

Response and Traversal to Restriction Requirement

The Examiner requires restriction between the following groups of claims:

- I. Claims 1-4, 6, 15, ²²22-28 and 42-52 (delayed release oral composition);
- II. Claims 8-14 and 29-41 (rectally administered composition).

The basis of the restriction requirement is that applicants have constructively elected the oral composition embodiment, and that the presentation of claims directed to rectal administration is improper at this time.

Applicants respectfully traverse the restriction requirement of the Examiner for the following reasons:

- (1) Applicants have not constructively elected the oral composition embodiment, as claims directed to both the oral composition and rectal administration were originally filed and subsequently examined without restriction by the Examiner. Applicants have accordingly not constructively elected either embodiment. The restriction requirement as asserted by the Examiner is without basis and should be withdrawn.
- (2) The grouping of the claims by the Examiner is inaccurate. Group I should include claims 1-4, 6, 15, 22, 24-26, 42-43 and 45-52. Group II should include claims 8-14, 23 and 27 28-41. Modification of the grouping of the claims by the Examiner is accordingly believed appropriate and hereby requested.

22 ← rectal
46-52

Applicants nonetheless in response to the restriction requirement elect with traverse the invention of Group I (claims 1-4, 6, 15, 22, 24-26, 42-43 and 45-52) for purposes of further examination. However, in the event that the Examiner refuses to withdraw the restriction requirement, applicants will seek further reconsideration by way of petition.

Rejection under 35 USC 103(a) over Savastano et al

Claims 1-4, 6, 15, 22-28 and 42-52 stand rejected under 35 USC 103(a) as being unpatentable over Savastano et al U.S. Patent No. 5,681,584. This rejection respectfully is traversed to the extent deemed to apply to the claims as amended.

The '584 patent discloses a time-controlled release composition for use in the treatment of IBD. The patent discloses that HPMC may be used as a binder and that HPMC or xanthan gum may be used as a suspending/thickening agent in the composition. Such a composition is apparently useful for delivering a large number of active agents (see column 6, lines 33-65). However, there is no teaching of the use of either HPMC or xanthan gum themselves as the therapeutic agent.

In Example 1, HPMC is used as a binder for the semi-permeable membrane of the disclosed colonic delivery device. Example 3 discloses HPMC as a binder for the core of the semi-permeable membrane of the device, with the active agent being acetaminophen. HPMC is also disclosed as a binder for the delay jacket and the semi-permeable membrane. The Examiner's attention is directed to Example 4 of the patent in which HPMC is used as the binder, but for a placebo core. This clearly contradicts any assumption that the patent teaches the use of HPMC as an active agent.

Further, the teaching of the use of HPMC as a binder or coating does not suggest the claimed invention. The *Handbook of Pharmaceutical Excipients* (A.H. Kibbs, 3rd ed) lists the functions of HPMC as a "coating agent; film-former; rate-controlling polymer for sustained release; stabilizing agent; suspending agent; tablet binder; viscosity-increasing agent", and lists the functions of xanthan gum as a "stabilizing agent; suspending agent; viscosity-increasing agent". The cited patent makes use of HPMC and xanthan gum in a manner consistent with the above teachings. There is no disclosure that

suggests the use of HPMC or xanthan gum as a potential therapeutic agent, particularly in the treatment of IBD. Indeed, the cited patent discloses the use of well-defined therapeutic agents which have no chemical or pharmaceutical agent with either HPMC or xanthan gum, both of which are polysaccharides.

In an attempt to more clearly distinguish over the cited patent, applicants amend claims 1 and 22 to state that the polysaccharide is the sole pharmaceutical agent. The claims as now presented distinguish over an embodiment where the polysaccharide is present merely as a coating or binder.

The cited patent thus fails to disclose or suggest the claimed invention. The rejection is without basis and should be withdrawn.

Rejection under 35 USC 103(a) over Ulmius

Claims 1-4, 6 and 22-28 stand rejected under 35 USC 103(a) as being unpatentable over Ulmius U.S. Patent No. 5,643,602. This rejection respectfully is traversed to the extent deemed to apply to the claims as amended.

The '602 patent discloses a delayed release oral pharmaceutical composition useful in the treatment of IBD. The composition comprises a core comprising an active component and a first, release rate limiting layer comprising, for example, HPMC (see column 5, lines 5-27). The composition is surrounded by a second, outer layer, the solubility of which is pH dependent. The patent is silent with respect to the use of

xanthan gum or of a rectally administrable composition. In addition, there is no disclosure of the use of HPMC (or xanthan gum) as an active ingredient in the treatment of IBD.

In an attempt to more clearly distinguish over the cited patent, applicants amend claims 1 and 22 to state that the polysaccharide is the sole pharmaceutical agent. The claims as now presented distinguish over an embodiment where the polysaccharide is present merely as a coating or binder.

The rejection is thus without basis and should be withdrawn.

Rejection under 35 USC 103(a) over Theeuwes et al

Claims 1, 3, 6 and 22 stand rejected under 35 USC 103(a) as being unpatentable over Theeuwes U.S. Patent No. 4,904,474. This rejection respectfully is traversed to the extent deemed to apply to the claims as amended.

The '474 patent is directed to a composition for the delivery of a drug to a pre-selected region of the GI tract (such as the colon) to treat a number of conditions including IBD. In a preferred embodiment, the composition comprises HPMC (having a molecular weight of from 9200 to 23,000 and a viscosity of from 3 to 50 cp of a 2% aqueous solution at 20 °C) as an aid for delay in drug release and forming a dispensable composition. The patent is silent with respect to the use of xanthan gum as well as the use of a rectally administrable composition. There is no disclosure of the use of xanthan

gum or of the rectal administration of the composition. In addition, there is no disclosure of the use of HPMC (or xanthan gum) as an additive drug to treat IBD.

In an attempt to more clearly distinguish over the cited patent, applicants amend claims 1 and 22 to state that the polysaccharide is the sole pharmaceutical agent. The claims as now presented distinguish over an embodiment where the polysaccharide is present merely as a coating or binder.

In view of the above, the rejection is without basis and should be withdrawn.

The application is now believed to be in condition for allowance and an early indication of same is earnestly solicited.

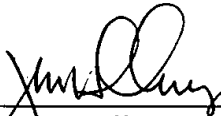
In the event that any outstanding matters remain in this application, Applicants request that the Examiner contact James W. Hellwege (Reg. No. 28,808) at (703) 205-8000 to discuss such matters.

Applicant respectfully petitions under the provisions of 37 CFR 1.136(a) and 1.17 for a one-month extension of time in which to respond to the Examiner's Official Action. The Extension of Time fee in the amount of \$110.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Very truly yours,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

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MARKED UP COPY OF CLAIM AMENDMENTS

Claims 4, 31, 34, and 44 are cancelled without prejudice or disclaimer.

The claims are amended as follows:

1. (Three Times Amended) A post-gastrically available delayed release oral (DRO) pharmaceutical composition for the treatment or prophylaxis of inflammatory bowel disease (IBD), said composition comprising as the sole therapeutically active ingredient a polysaccharide selected from the group consisting of xanthan gum and hydroxypropylmethylcellulose (HPMC) [as a therapeutically active agent] in an amount effective to treat inflammatory bowel disease, together with a pharmaceutically acceptable carrier or vehicle.

22. (Three Times Amended) A method for the treatment or prophylaxis of inflammatory bowel disease (IBD) comprising contacting the diseased mucosa of the gastro-intestinal tract with a therapeutic amount of a polysaccharide selected from the group consisting of xanthan gum and hydroxypropylmethyl-cellulose (HPMC) as the sole therapeutic agent

33. (Amended) A rectally administrable pharmaceutical composition for the treatment or prophylaxis of inflammatory bowel disease (IBD), said composition comprising hydroxypropylmethylcellulose (HPMC) as [a] the sole therapeutically active agent in an amount effective to treat inflammatory bowel disease, together with a pharmaceutically acceptable carrier or vehicle.